

06944850 10057  
16007 052450

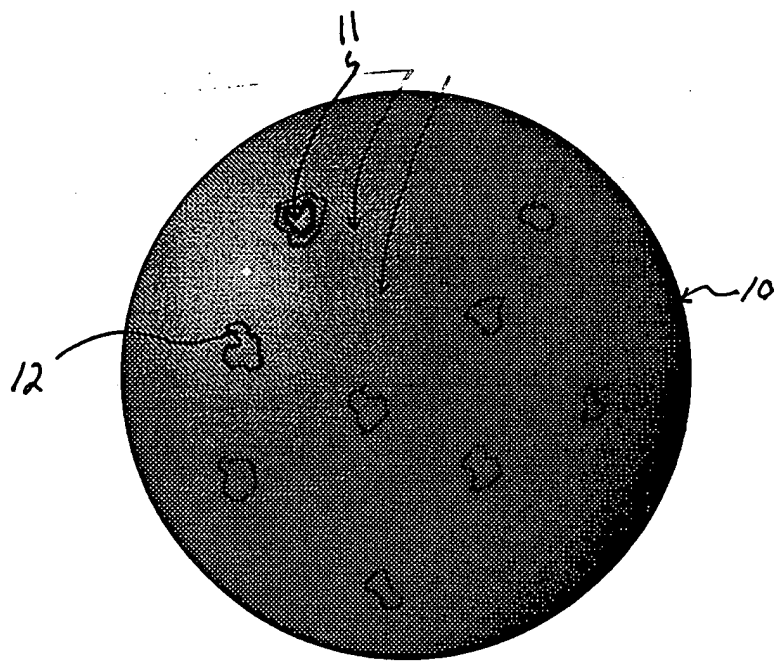


Fig. 1

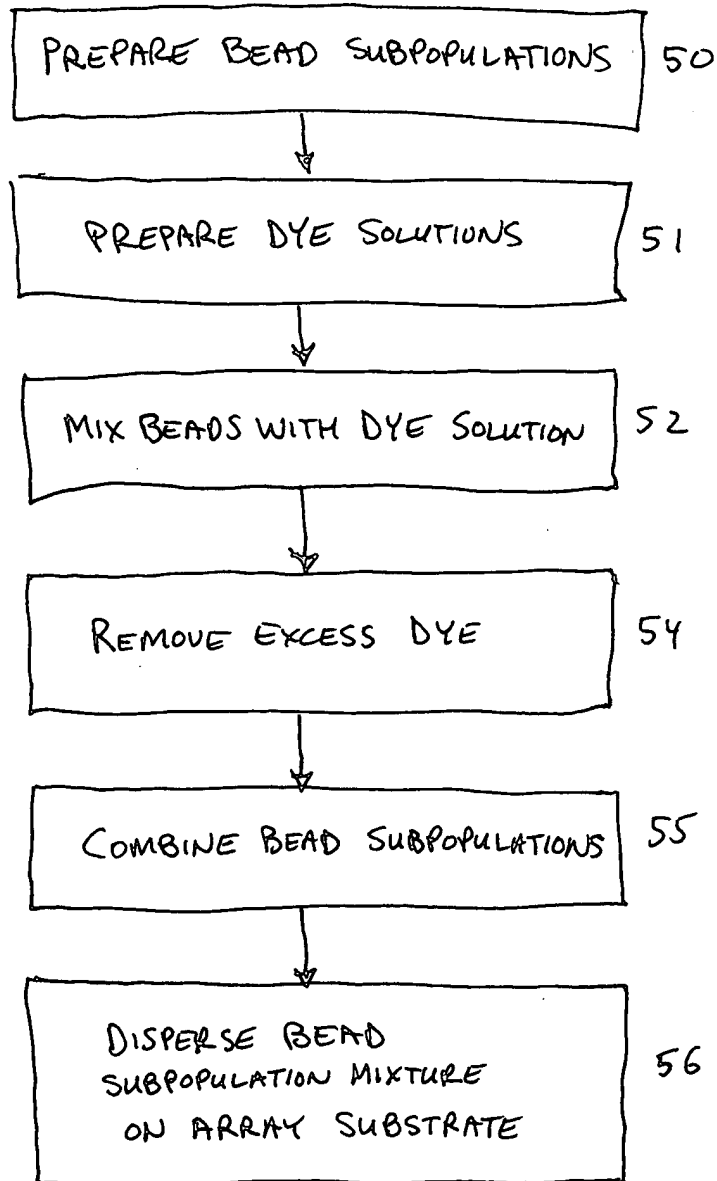
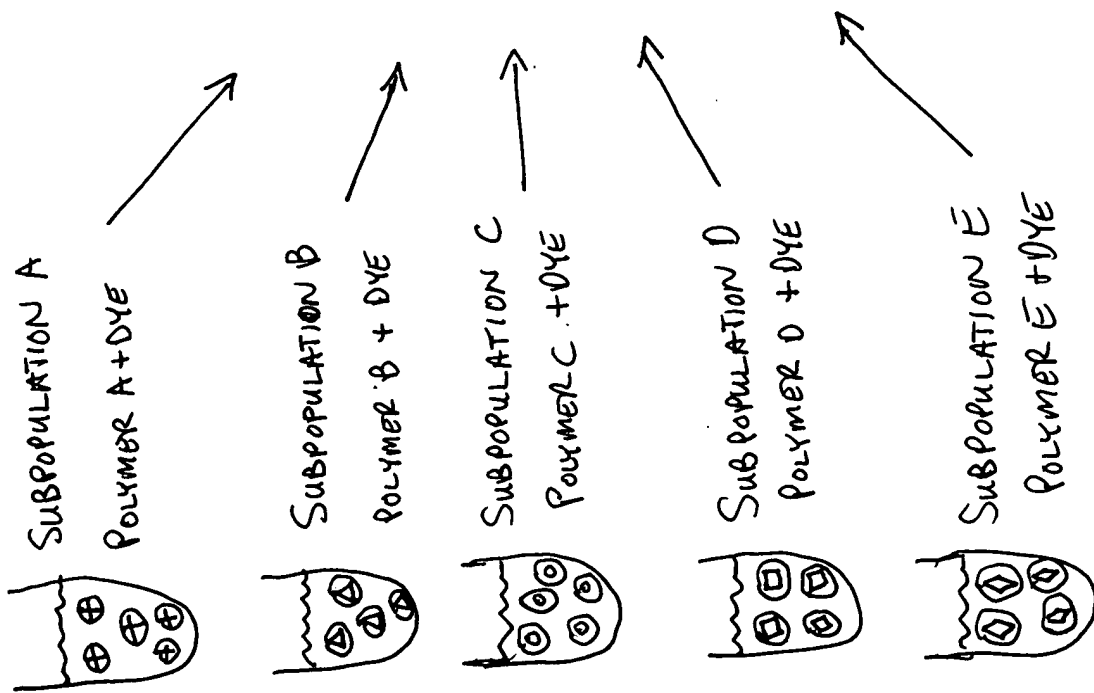


Fig. 2

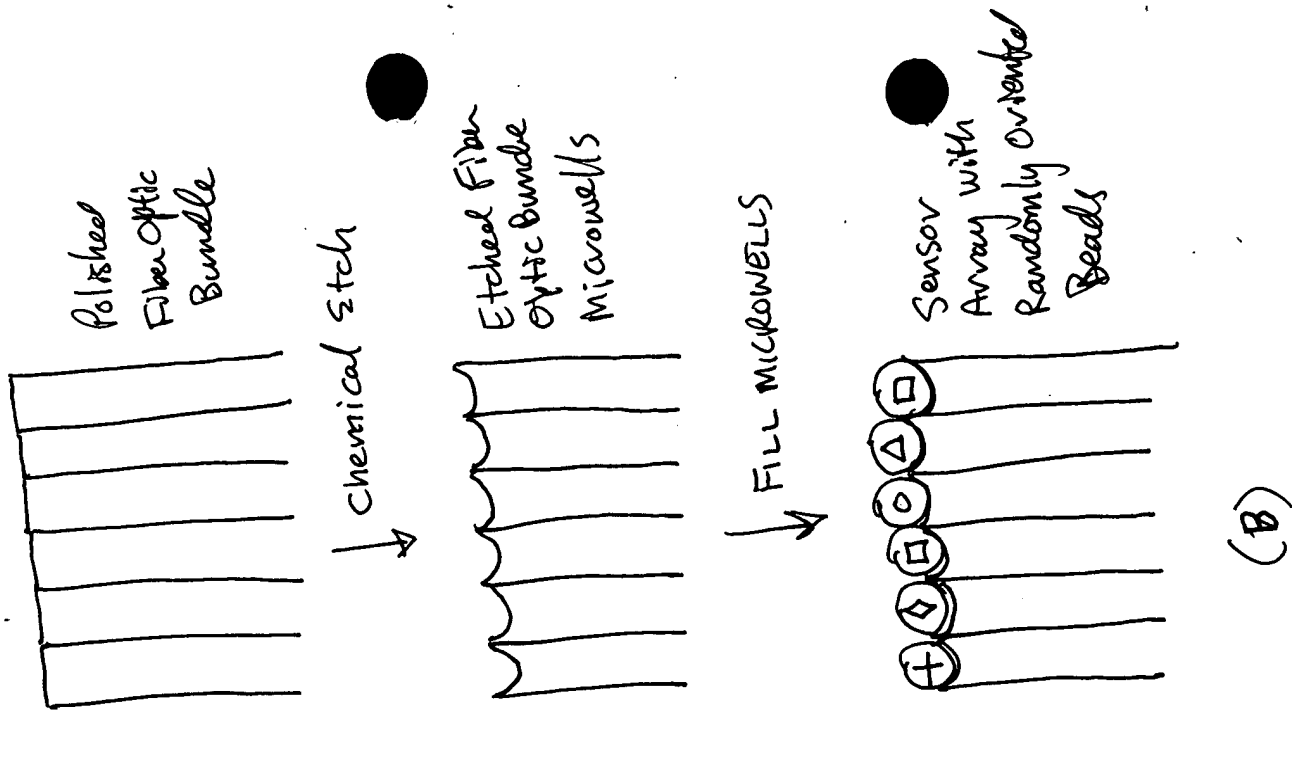
## BEAD SUBPOPULATION PREPARATION



(A)

Fig. 3

## FIBER OPTIC ARRAY PREPARATION



(B)

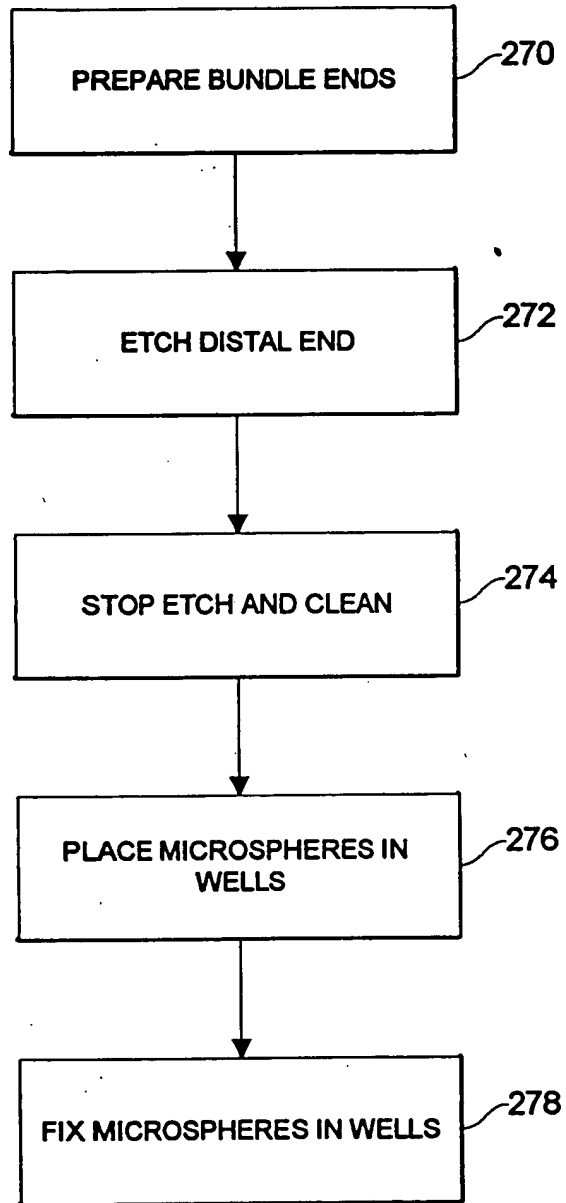


Fig. 4

Fig. 5A

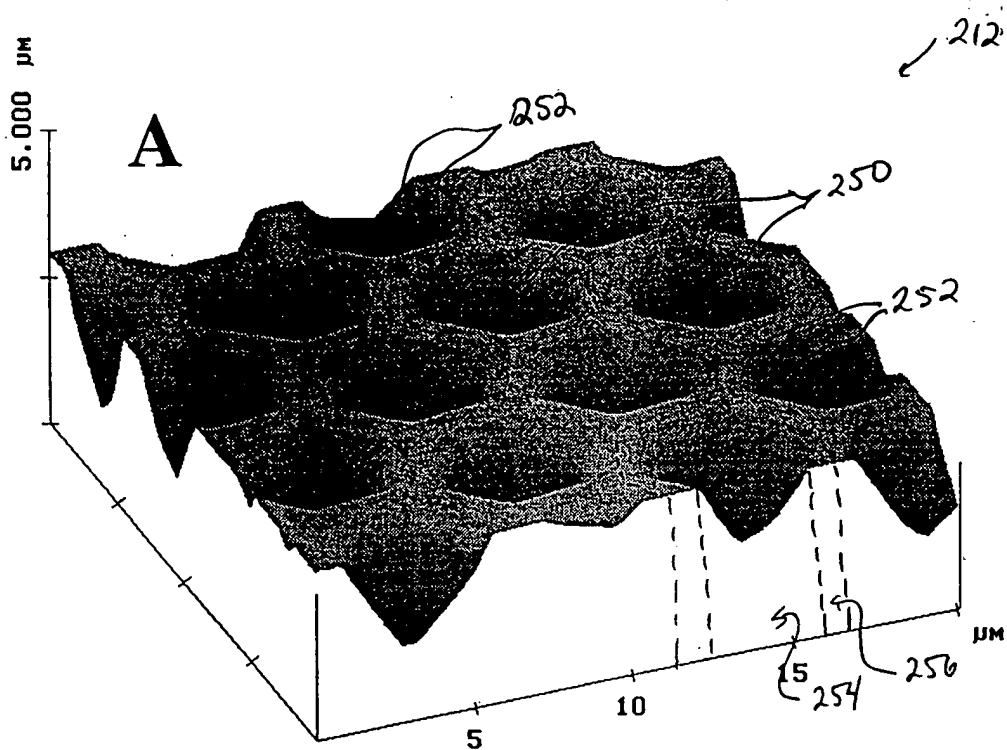
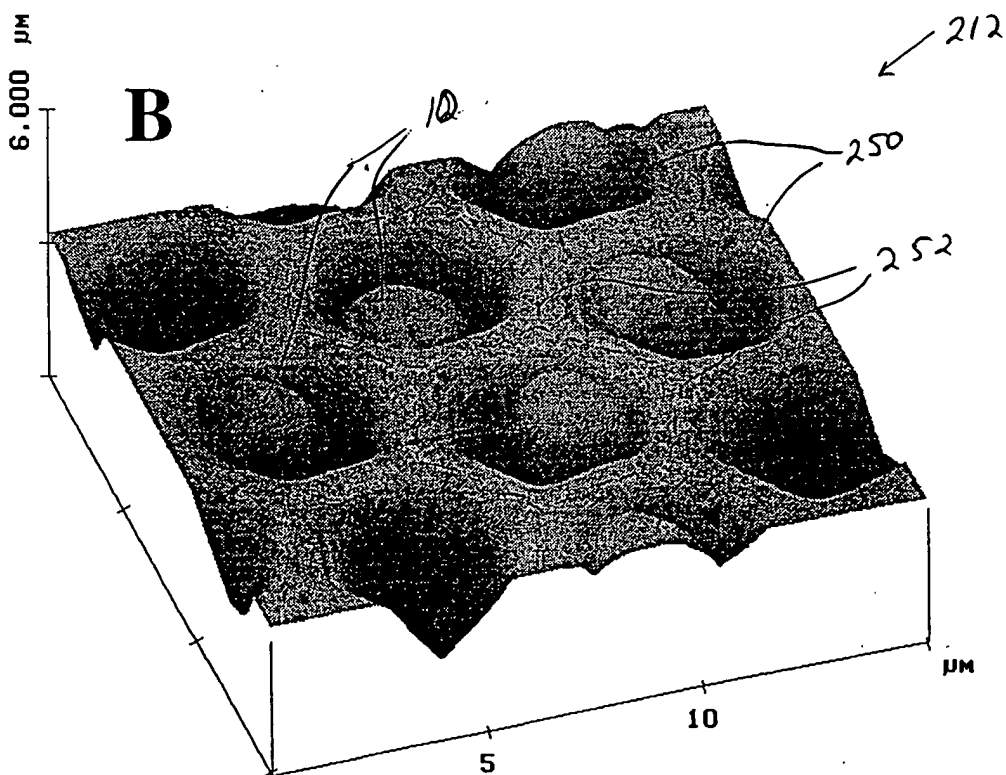
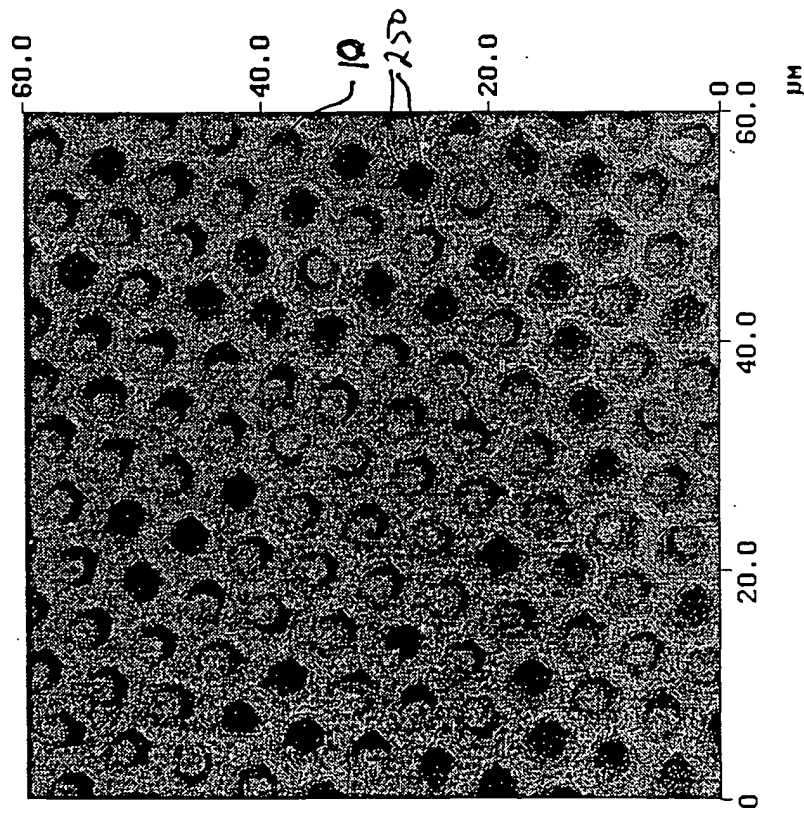


Fig 5B

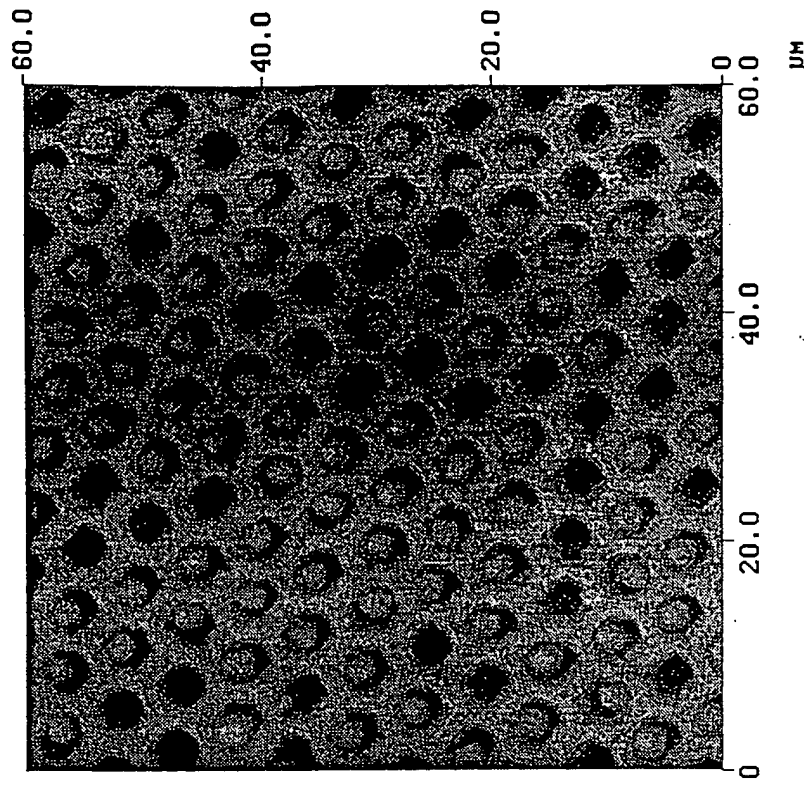


# Polymer Coated Beads in Wells After Air Pulse and Tapping



Before Tapping

Fig. 6A



After Tapping

Fig. 6B

SECRET

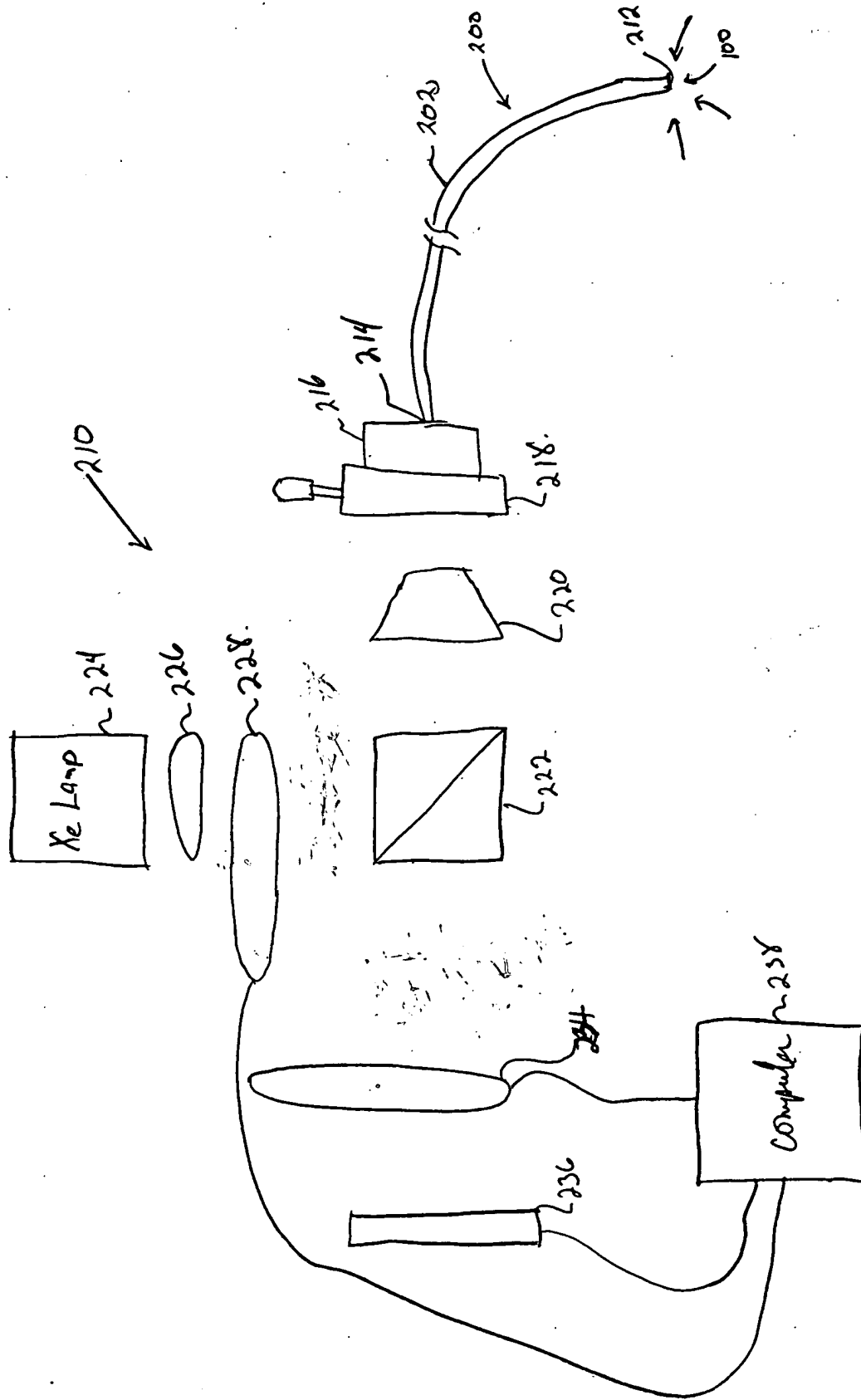


Fig. 7

The diagram illustrates the experimental setup for measuring the fluorescence quantum yield of a polymer. The setup includes the following components and their interconnections:

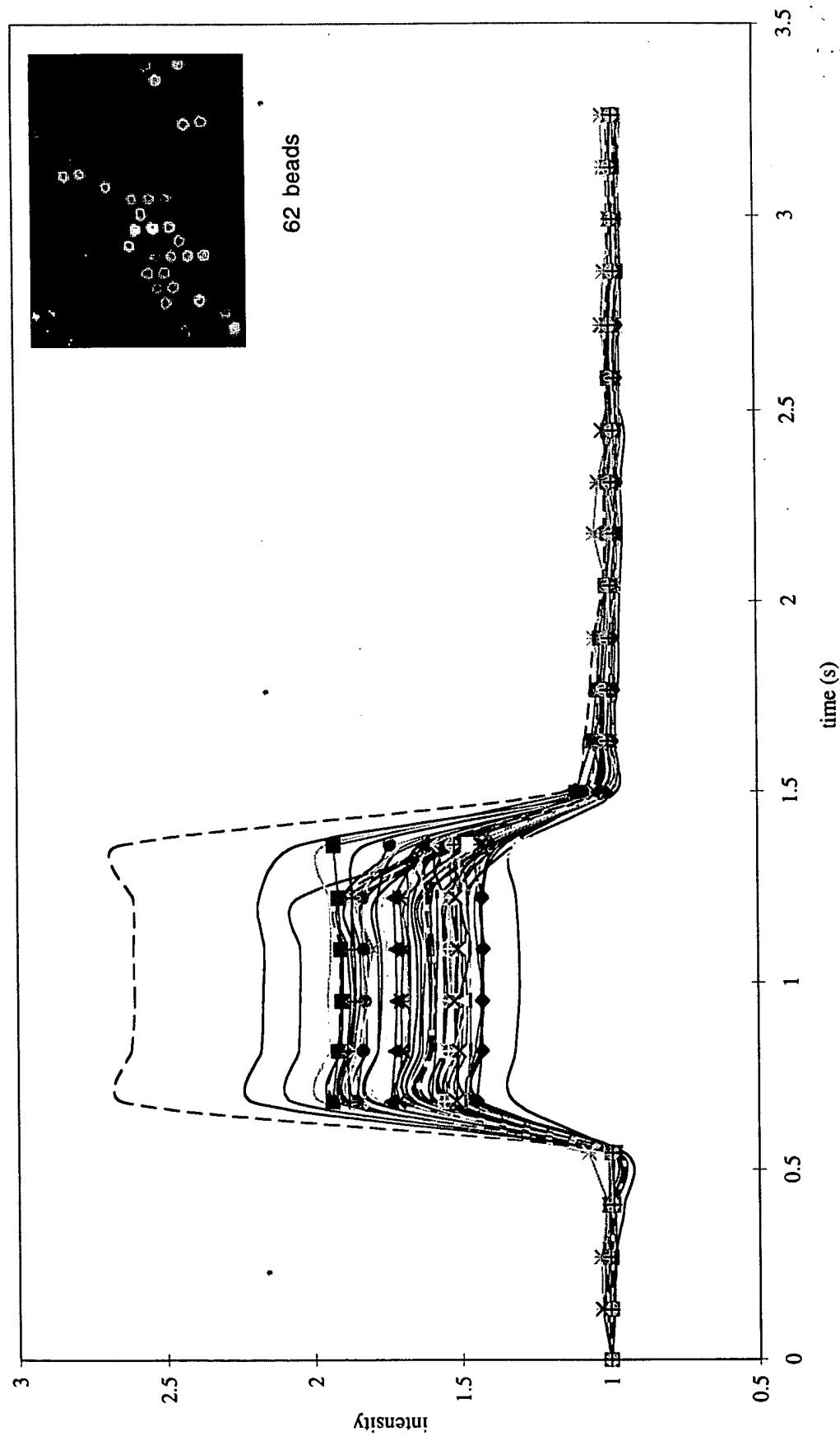
- ARC LAMP 340:** The light source, represented by a box with a star symbol inside.
- EXCITATION FILTER/SHUTTER 350:** A vertical rectangular component that filters the light from the arc lamp.
- Dichroic Mirror 330:** A diamond-shaped component that directs the excitation light into the microscope and reflects the emission light towards the camera.
- MICROSCOPE 320:** A rectangular component that focuses the excitation light onto the sample and collects the emitted fluorescence.
- FIBER CHUCK 300:** Two small square components that hold the fiber optic cable in place.
- 214:** A wavy line representing the fiber optic cable, which carries light from the microscope to the olfactometer system.
- 202:** A label for the fiber optic cable.
- 100:** A label for the fiber optic cable.
- OLFACTOMETER SYSTEM 500:** A rectangular component that receives light from the fiber optic cable and is connected to the computer.
- 212:** A wavy line representing the fiber optic cable, which carries light from the olfactometer system to the camera.
- EMISSION FILTER/SHUTTER 360:** A horizontal rectangular component that filters the emission light before it reaches the camera.
- CCD CAMERA 310:** A rectangular component that captures the fluorescence image.
- COMPUTER 400:** A rectangular component that controls the system and receives data from the camera and olfactometer system.

Fig. 8



Fig. 9

# Porous 3 $\mu$ m silica beads high-speed response to Saturated Toluene

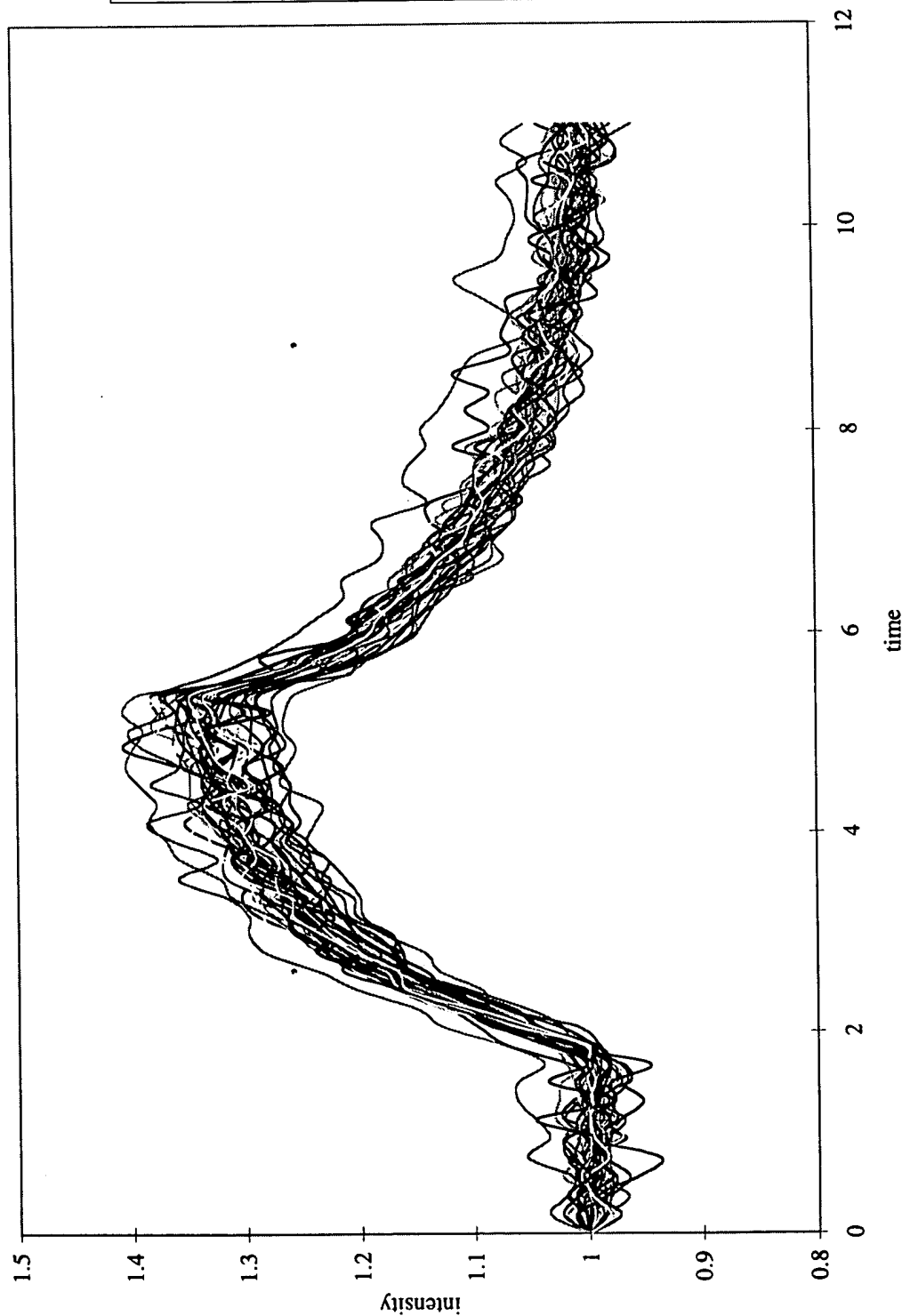


8/2/84

Fig. 10

# PMS Beads in Fiber: Response to Methanol (sat)

39 beads, mid-fiber region: centroid ovals, standardized responses



— 1	— 2
— 3	— 4
— 5	— 6
— 7	— 8
— 9	— 10
— 11	— 12
— 13	— 14
— 15	— 16
— 17	— 18
— 19	— 20
— 21	— 22
— 23	— 24
— 25	— 26
— 27	— 28
— 29	— 30
— 31	— 32
— 33	— 34
— 35	— 36
— 37	— 38
— 39	

8/2/84

15300T-0504630

8/2/84

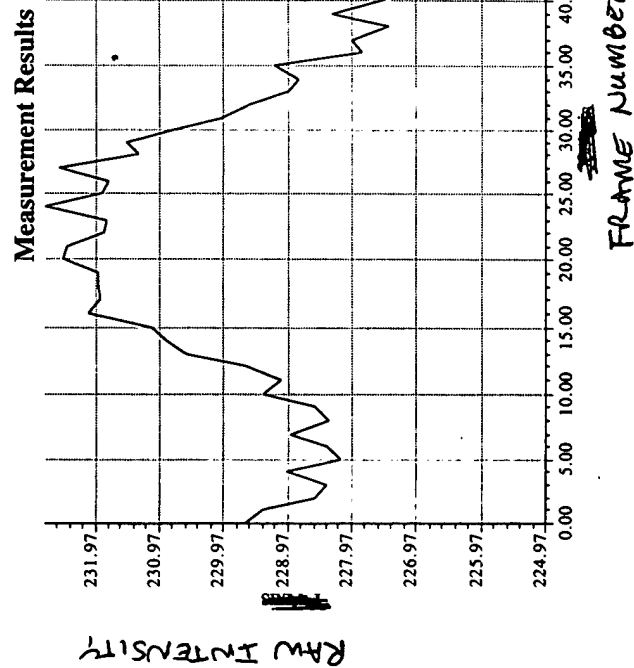
Fig. 11A/11B

# PS802 648.c Beads

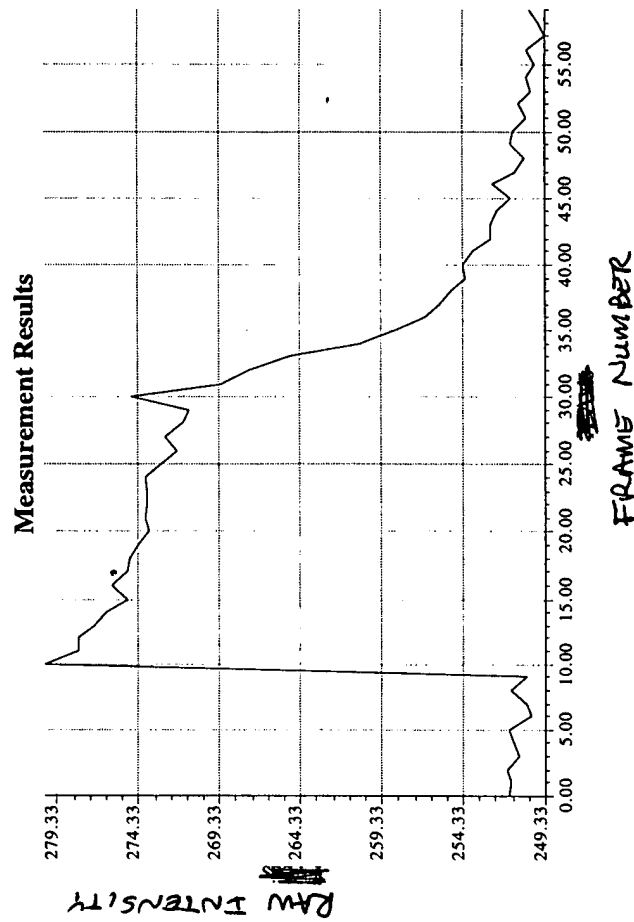
bead 1

Saturated Toluene

Saturated Methanol



(A)



(B)

SECRET

SECRET

15 OCT 1994 16:00

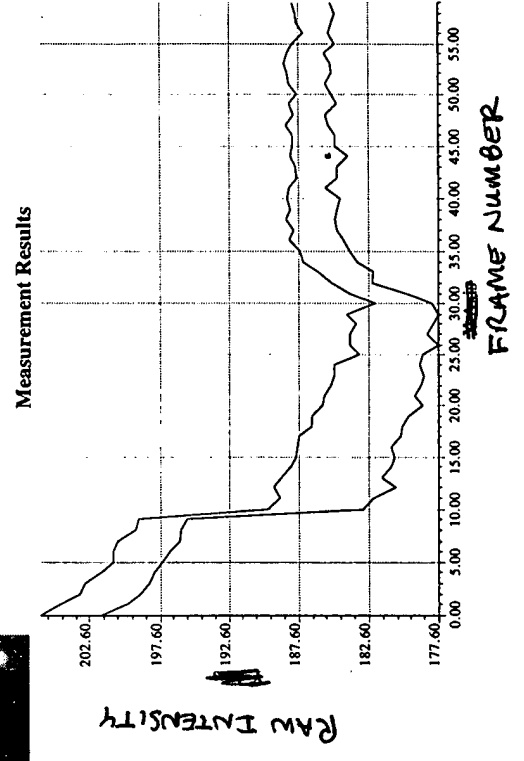
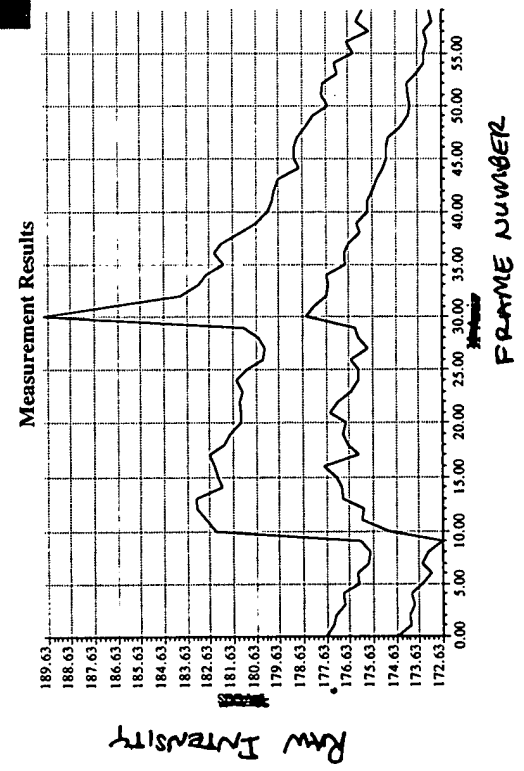
Fig. 12A/12B

PDPO/psil 9/11

tol



met

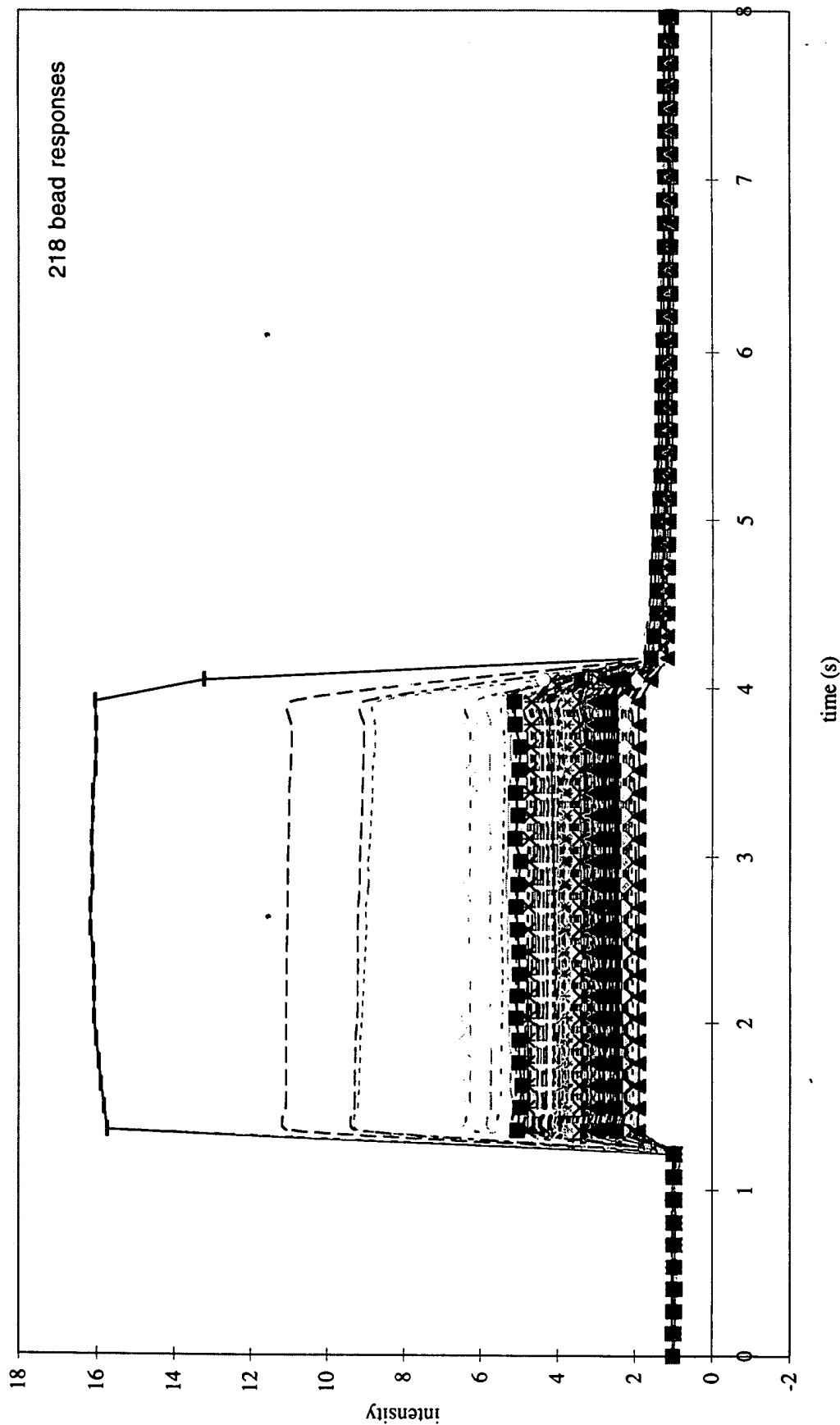


15 OCT 1994 16:00

15 OCT 1994 16:00

Fig. 13

# Porous 3 $\mu$ m silica beads response to Ethyl Acetate



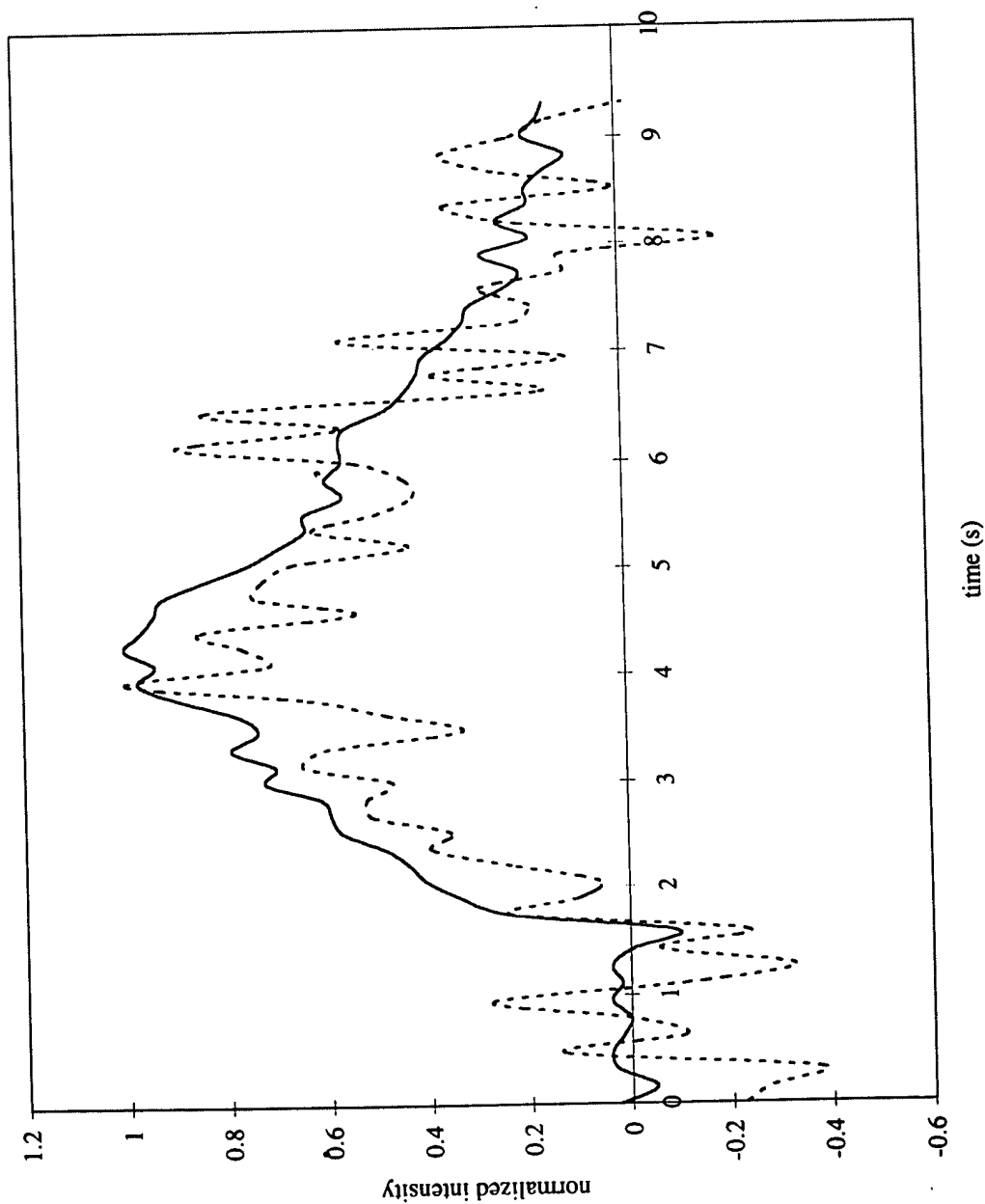
*[Handwritten signature]*

*[Handwritten signature]*

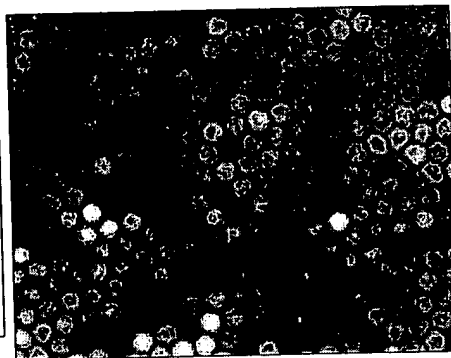
*[Handwritten signature]*

Fig. 14

Normalized signal-to-noise comparison between  
bead #1 and summed responses of 39 beads



----- region #1  
—— sum



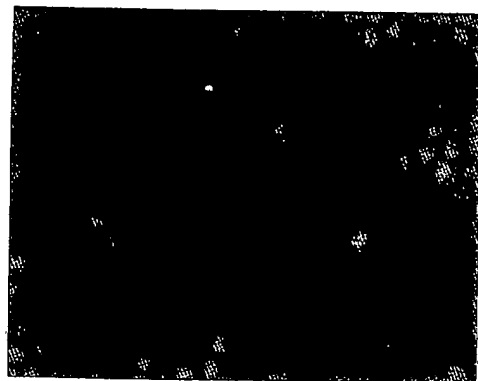
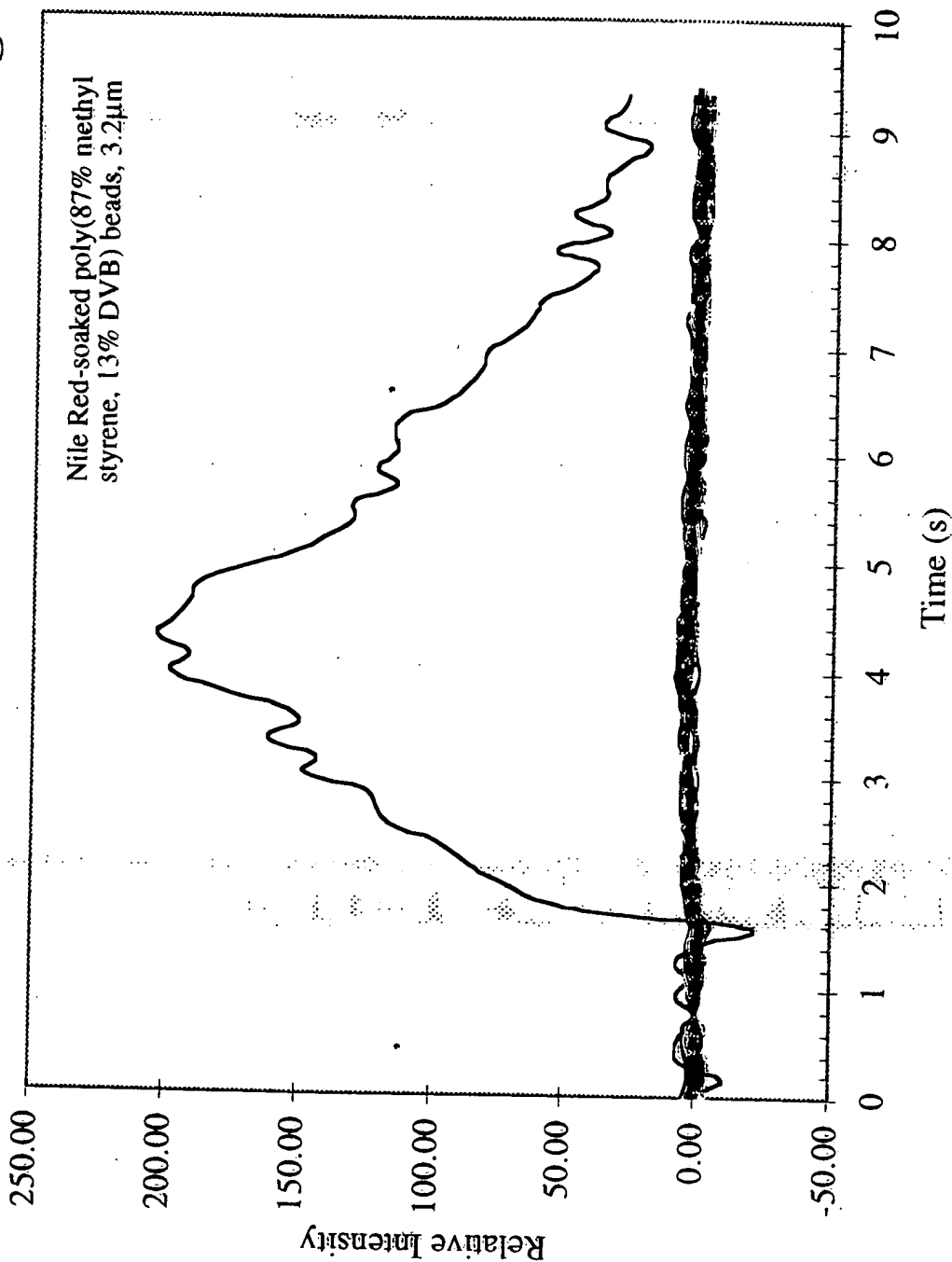
~~SECRET~~

SECRET

SECRET

Fig. 15

# Signal Enhancement Through Multi-bead Response Summing



bright = wells with beads  
dark = empty wells

SECRET

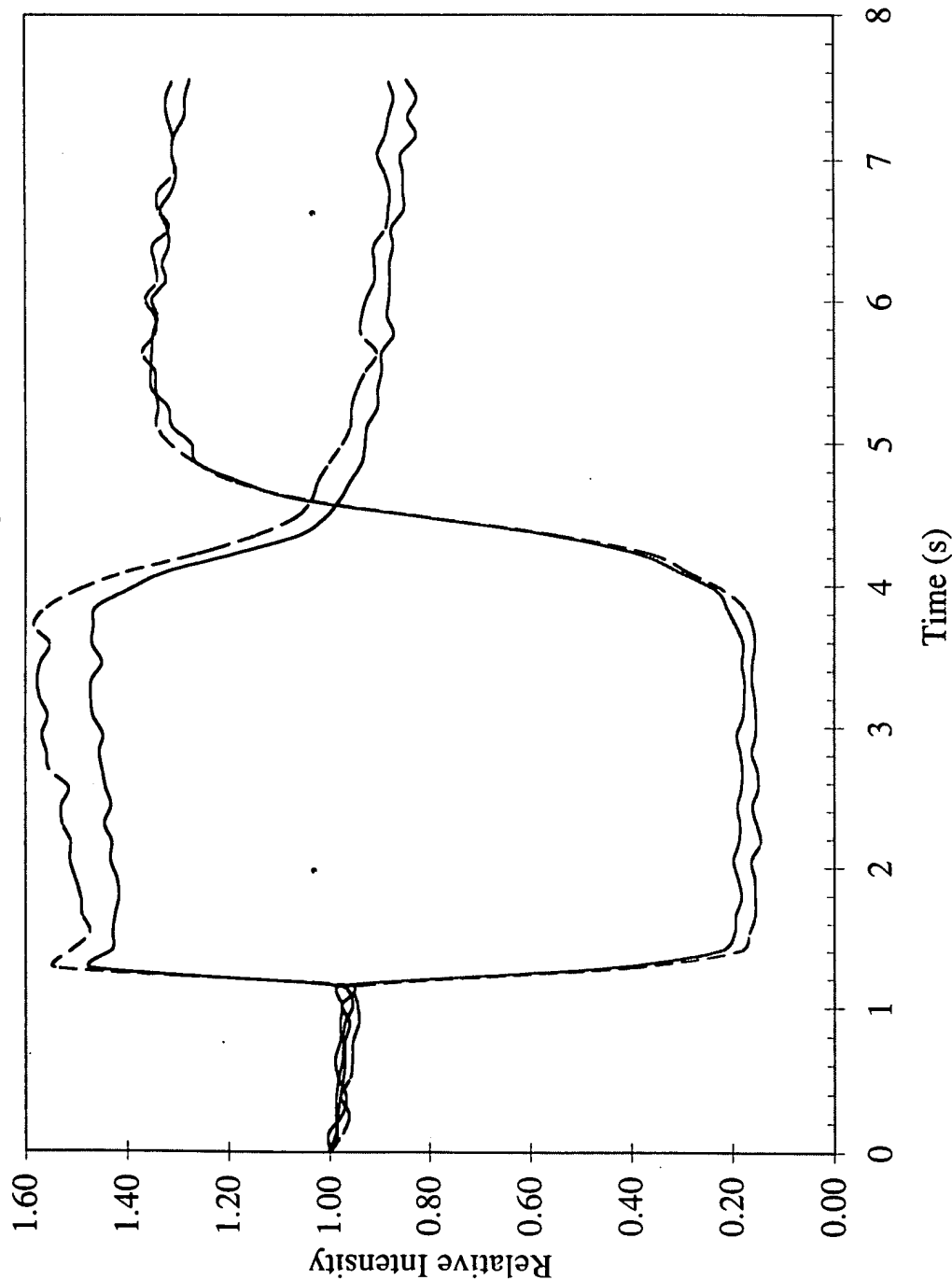
050446Z

*Handwritten signature*

Fig. 16

# "Thick-layer" PS802/Silica 3.2 $\mu$ m Beads

Region 2



-Saturated vapor  
-100X objective  
-50ms exposure

— met1  
--- met2  
— tol1  
--- tol2

260.1A

*Handwritten signature*

*Handwritten signature*

*Handwritten signature*



# Self-Encoding Array with Two Bead Types in Image Guide Wells

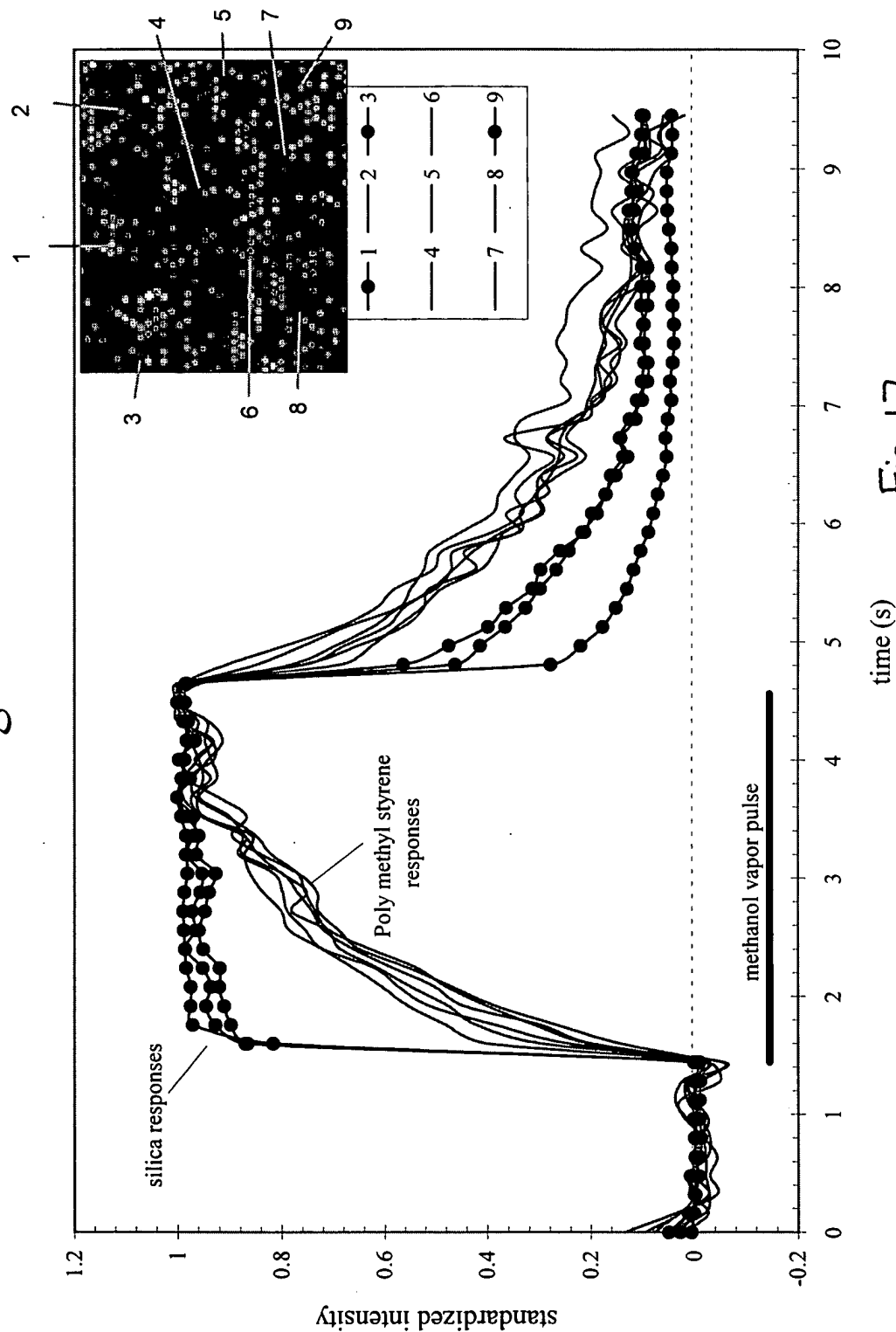


Chart3

# Self-Encoding Array with Two Bead Types in Image Guide Wells

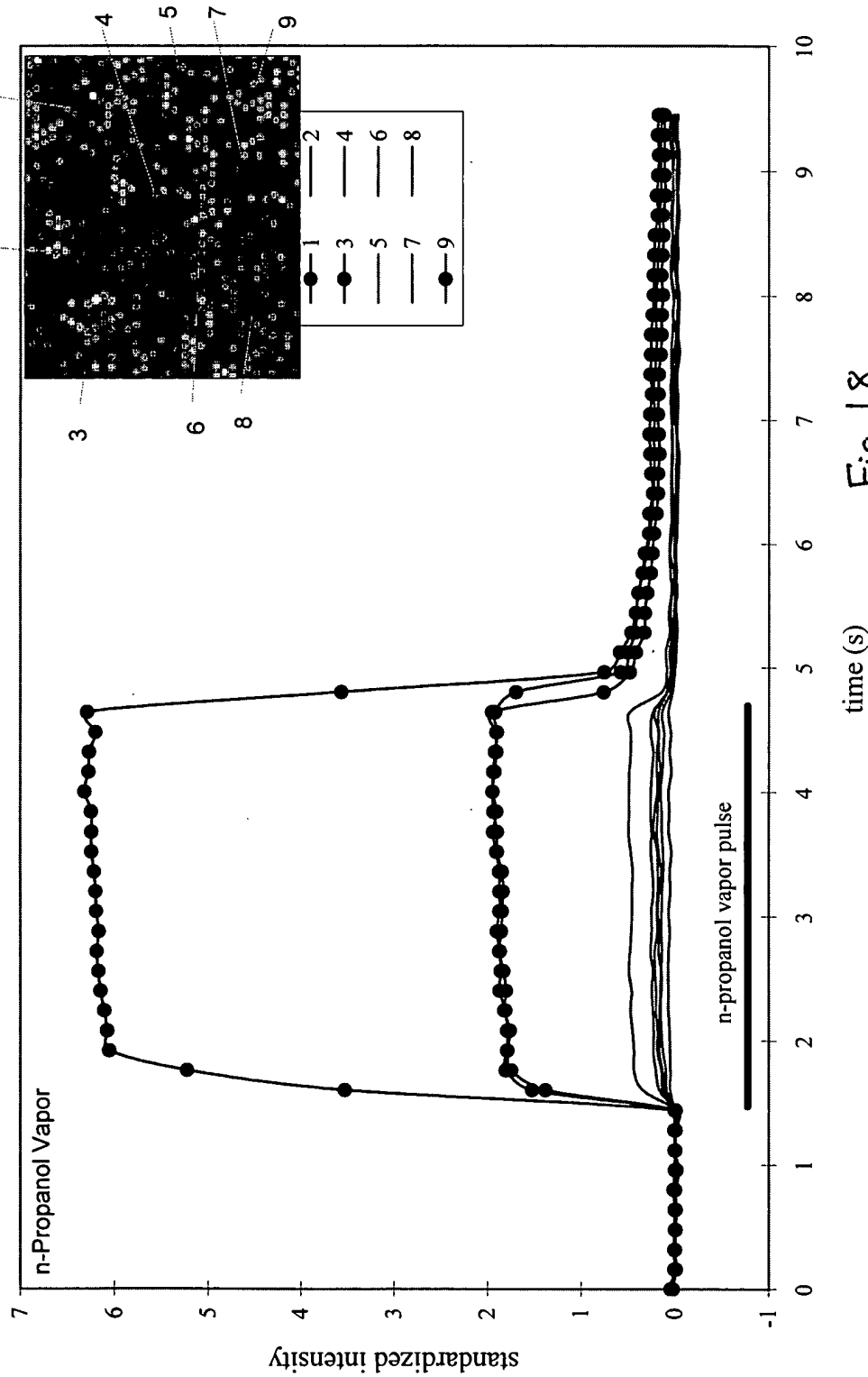


Fig. 18

Chart4

# Self-Encoding Array with Two Bead Types in Image Guide Wells

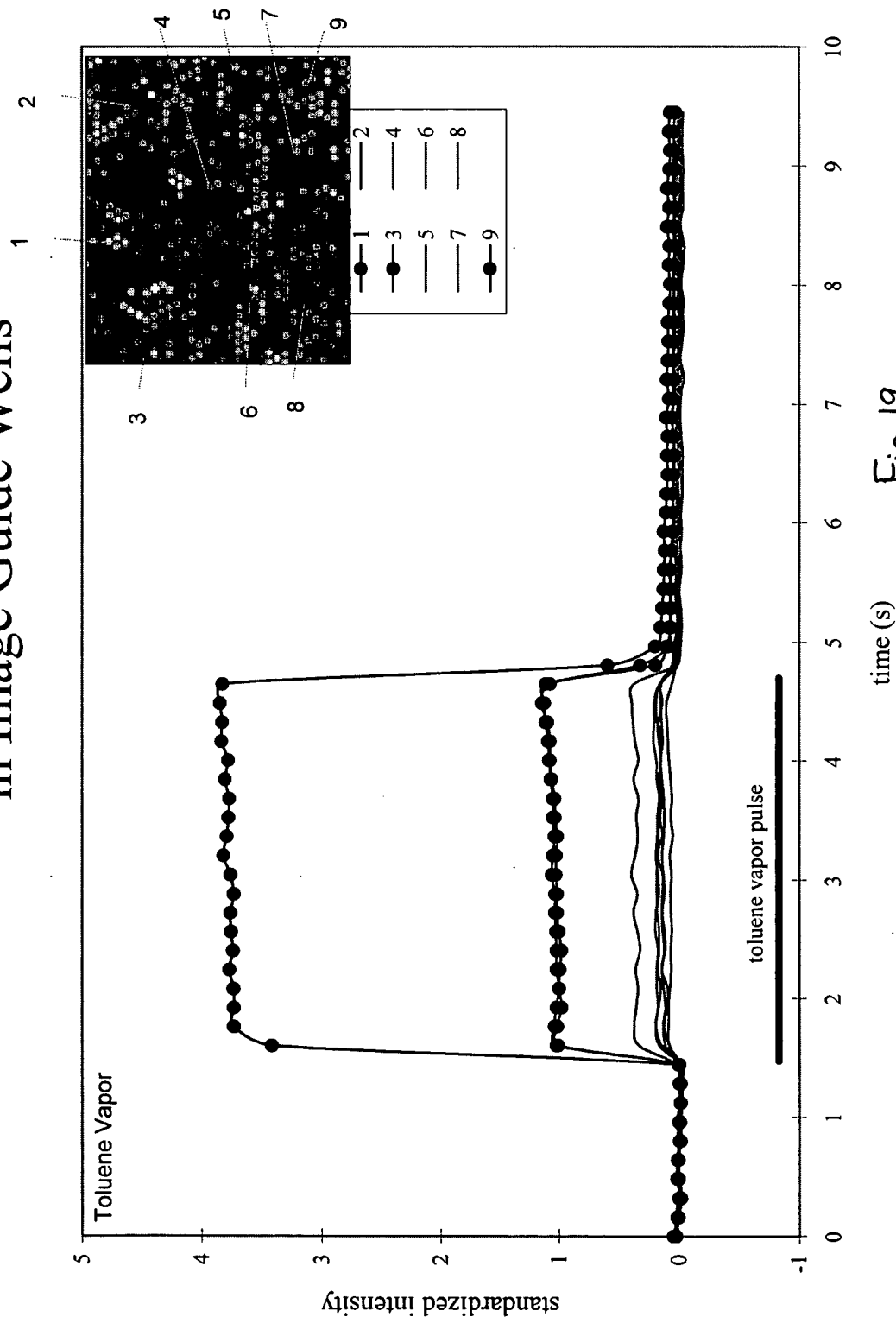
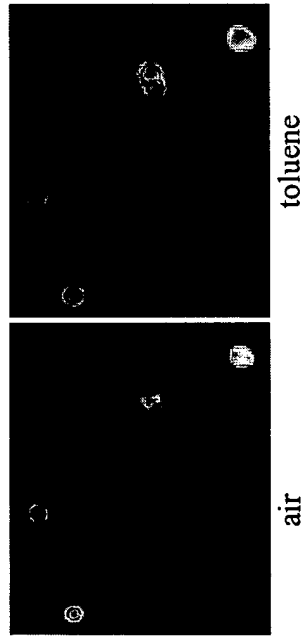


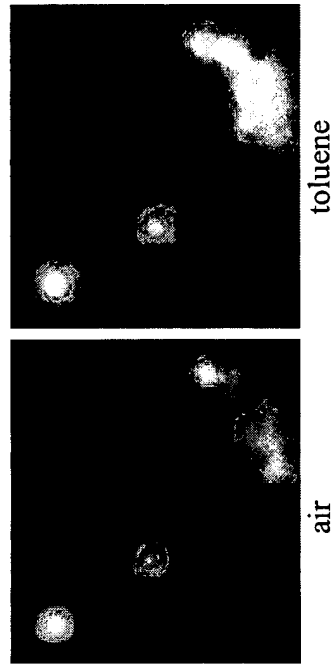
Fig.19

# Swelling of three different bead types in presence of saturated toluene vapor

PS802 648.c



Poly methyl styrene/  
2% divinyl benzene



Poly methyl styrene

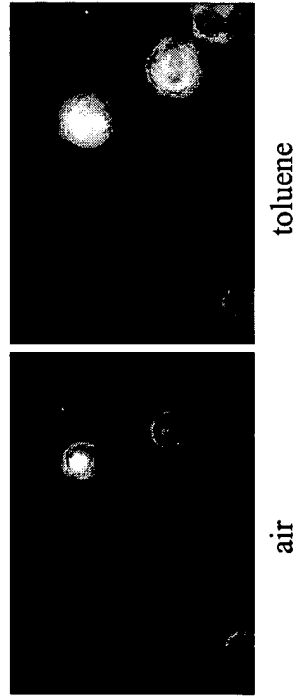


Fig. 20